

**REMARKS****Status of the Claims**

Claims 1-11, 13-17 and 19-36 are pending.

Claims 1-11, 13-17 and 19-36 stand rejected.

Claims 1, 27, 28, 29, 30, 31, 33 and 34 are amended herein.

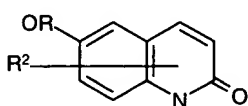
Reconsideration is respectfully requested.

**Section 112 Rejections****Claims 1-11, 13-17 and 19-36**

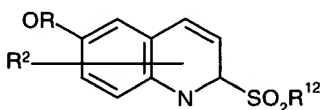
Claims 1-11, 13-17 and 19-36 stand rejected under 35 U.S.C. § 112 as allegedly being non-enabling to the extent that  $R^2$  is claimed as heteroalkyl, and  $R^{13}$  and  $R^{14}$  are claimed as together forming a heterocycloamino group.

Initially, it is noted that the selections of  $R^2$  being heteroalkyl and  $R^{13}$  and  $R^{14}$  as together forming a heterocycloamino are not recited in claims 35 and 36. Thus, it is believed that pursuant to the Office Action, claims 35 and 36 are in condition for allowance.

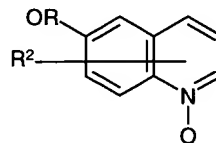
With regard to claims 1-11, 13-17, and 19-34, applicant submits that the claim of  $R^2$  being heteroalkyl, and  $R^{13}$  and  $R^{14}$  as together forming a heterocycloamino, while not exemplified in the specific examples, is enabled by the general schemes set forth at pages 17 through 26 of the specification. For example, regarding the group  $R^2$ , the schemes show methods of making compounds of Formula (I), herein, starting with the core structures of:



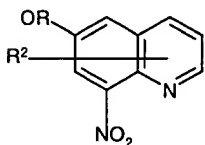
(Scheme A, p. 17);



(Scheme B, p. 19);

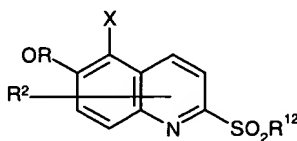


(Scheme B, p. 22);



(Scheme C, p. 23);

and



(Scheme D, p. 25).

Said core structures wherein  $R^2$  is a substituent as recited in claim 1 are commercially available or can be readily synthesized by one of ordinary skill in the art, *e.g.*, based on literature references (*see* Spec. at p. 18, lines 1-2, p. 20, lines 3-4, and p. 24, lines 6-7). Additionally, as illustrated in the general schemes, the progression of the reaction from these core structures to the claimed compounds will not be affected by the  $R^2$  substituent. In other words, the group  $R^2$  is a non-interfering substituent that may be attached to the starting material core structures, and the substituent is maintained on the core through the progression of the reaction. Applicant is entitled to claim such compounds wherein the core has a heteroalkyl substituent such as, for example, hydroxymethyl, hydroxyethyl, aminomethyl, and so forth.

Regarding the groups  $R^{13}$  and  $R^{14}$  as together forming a heterocycloamino, applicant submits these compounds are enabled by the general schemes C and D in that the reactants  $NaSR^{12}$  in Scheme C may be replaced with reactant  $NaSO_2NR^{13}R^{14}$ , and the reactant  $SR^{12}$  in Scheme D may be replaced with reactant  $SO_2NR^{13}R^{14}$ , wherein  $R^{13}$  and  $R^{14}$  form a heterocycloamino. However, without waiver of this position, and for the purpose of expediting prosecution and bringing the case to issuance, applicant has amended claim 1 to omit compounds wherein  $R^{13}$  and  $R^{14}$  form heterocycloamino.

#### Claim 27

Claim 27 stands rejected under Section 112 on the ground that the diseases being treated by COX-II inhibition are not specifically recited. Applicant notes that the specification at pages 44-45 describes that the claimed compounds are active as selective COX-II inhibitors. It is well known that COX-II inhibitors fall within the class of non-steroidal anti-inflammatory agents (NSAIDs), and have anti-inflammatory, analgesic, and anti-pyretic effects. *See, e.g., May et al., "Selective COX-2 inhibitors: A review of their Therapeutic Potential and Safety in Dentistry," Oral Surgery*, (October 2001), at pp. 399-404 (copy enclosed). COX-II inhibitors have been approved by the FDA for treatment of pain and arthritis, including Celecoxib and Rofecoxib (*Id.* at p. 402). Additionally, there is clear scientific support for use of COX-II inhibitors in the

treatment of cancer. *See, e.g.*, Spec. at pages 26-27, discussing scientific journals and evidence based on animal models that COX-II inhibitors are effective in the treatment of cancer.

Applicant has amended claim 27 to refer specifically to inflammatory disease, cancer, and pain as the diseases treatable by administration of a COX II inhibitor, according to the invention. Since there is ample evidence to support these indications with use of COX-II inhibitors, and support in the specification that the claimed compounds are selective COX-II inhibitors, it is respectfully requested that the Section 112 rejection to claim 27 be withdrawn.

#### Claim 28

Claim 28 stands rejected under Section 112 on the ground that the diseases recited in this claim are unrelated and not enabled. Applicant notes that each of the diseases recited in claim 28 are supported in the specification at page 26, lines 17-21. Each of the diseases recited in claim 28, as amended, is an inflammatory disease or pain. (The disease of ankylosing spondylitis was not spelled correctly, and this error was corrected.) As noted above, it is well known that COX-II inhibitors are effective NSAIDs and useful in treating pain and inflammatory disease.

#### Claims 29 and 30

Claims 29 and 30 have been amended herein in form only, *i.e.*, these claims were amended for antecedent basis purposes. In particular, the dependency of claims 29 and 30 upon claim 27 has been removed in view of the amendments to claim 27, discussed above.

#### Claims 31, 33 and 34

Applicant gratefully acknowledges the Examiner's observation regarding the punctuation in these claims, and the claims have been amended accordingly.

Serial No. 09/925,883

PATENTS  
R0072B-REG

**CONCLUSION**

In view of the foregoing, Applicant believes the claims are in condition for allowance and respectfully requests that the application proceed to issuance.

Respectfully submitted,



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